

## Data Brief December 2003

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## Children's Psychotropic Medication Use by Age and Diagnostic Sub-groups

### Background

The Policy and Services Research Data Center Data Brief #2 (October, 2003) examined the diagnostic sub-groups of children receiving Medicaid-funded Mental Health services. That brief indicated that more than 120,000 children statewide received such services from July 1, 2001- June 30, 2002. This report examines the types of psychotropic medications paid for by Medicaid among these diagnostic groups.

Practice parameters published by the American Academy of Child and Adolescent Psychiatry (<http://www.aacap.org/clinical/parameters/index.htm>) indicate that various psychotropic medications may be effective in treating child and adolescent disorders such as ADHD, Anxiety Disorders, Affective Disorders (Bipolar Disorder, Major Depressive Disorder), and Schizophrenia. Only stimulants, Tricyclic antidepressants (TCA), and SSRI antidepressants have been extensively studied for use by children and adolescents. Stimulants have been shown to be effective in short-term treatment for ADHD. Other treatment guidelines are largely based on practice guidelines developed for adults. Predominant medications reviewed in these articles are summarized in Appendix A. Disorders in Appendix A are specified where there is some evidence of treatment effectiveness within a broad therapeutic class, based on articles posted on above website.

### Methods

All claims for Medicaid enrollees from the Florida AHCA Fee-for-service (FFS) Medicaid services data set with dates of service from July 1, 2001 - June 30, 2002 were used in these analyses. Claims were restricted to those submitted for Medicaid enrolled children, ages 1 to 17. All of these claims were included unless they were submitted while the child was enrolled in an HMO or the Pre-paid Mental Health program.



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The classification scheme developed for Data Brief #2 was used as a basis for this analysis. In addition to the population differences noted above, the following criteria were also employed to ensure diagnostic homogeneity: a) there had to be two primary diagnosis claims within a diagnostic classification group during the year, and b) people with multiple diagnoses were placed in a multiple diagnosis group.

The psychotropic medications included in this data brief were brand name medications and their generic equivalents as listed on AHCA's preferred drug list: [http://www.fdhc.state.fl.us/Medicaid/Prescribed\\_Drug/pharm\\_thera/fmpdl.shtml](http://www.fdhc.state.fl.us/Medicaid/Prescribed_Drug/pharm_thera/fmpdl.shtml)). \* See Appendix A for list of Drugs within Drug Class

## Results

The number of children receiving mental health services reimbursed by Medicaid in Florida within these stricter diagnostic criteria in 2001-2002 was 73,403. The breakdown of children who received mental health services in these diagnostic categories is shown in Table 1. Based on the low N, the Personality Disorder group was re-assigned to the Other Mental Health Disorder group.

**Table 1.**  
**Percentage of Children in Each Diagnostic Group (N=73,403)**

Diagnostic Group	Percentage
Developmental/Mental Retardation	25%
ADD/ADHD	21%
Adjustment Disorder	10%
Conduct Disorder	10%
Anxiety Disorder	6%
Affective Disorder	3 %
Personality Disorder	0%
Substance Abuse Disorder	1%
Schizophrenia/Psychosis	0.4%
Other Mental Health Disorders	3%
Multiple Diagnoses	21%

In Figure 1, it can be seen that the majority of children in four of the diagnostic groups were treated with psychotropic medication during the year.

**Figure 1.**  
**Percentage of Children that Received Any Psychotropic Medication Within Each Diagnostic Group**

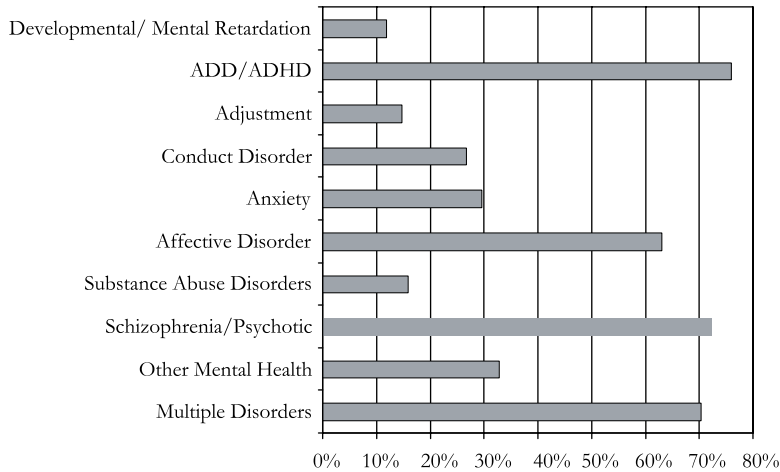
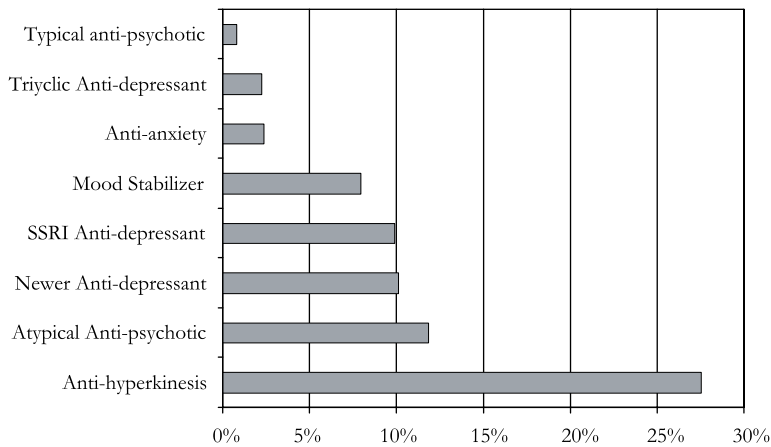


Figure 2 depicts the relative frequency of the types of psychotropic medication prescribed.

**Figure 2.**  
**Percentage of Children in Diagnostic Groups (N=74,186) that Received Psychotropic Medication by Pharmaceutical Type**



The most commonly prescribed pharmaceutical class was anti-hyperkinetic medication (such as Ritalin or Adderall), followed by atypical anti-psychotic medication, SSRI and newer anti-depressants, and mood stabilizers. As would be expected from treatment parameters in Appendix A, the medications prescribed most often are consistent with the diagnostic groups that most commonly utilize psychotropic medication. However, the percentage of the children using atypical

antipsychotics, SSRI or newer antidepressants, and mood stabilizers far exceed the percentage of children in the Schizophrenia and Affective Disorders groups as shown in Table 1.

To further examine this relationship between diagnostic group and pharmaceutical group, we limited the analysis to only three of the diagnostic groups that showed significant pharmacy use: ADD/ADHD, Affective Disorders, and Schizophrenia/Psychosis. As Affective Disorders covers both Major Depression and Bipolar Disorders, and these have differing pharmaceutical practice parameters, we broke Affective Disorders into these two distinct diagnostic groups. We restricted Multiple Disorders to those children with multiple diagnoses among these four diagnostic groups only, which included slightly more than one third of the children in this study. The number of children in these groups was 28,619 with 77% in the ADD/ADHD group, 8% in the Multiple Diagnosis group, 9% in the Major Depression group, 4% in the Bipolar Disorder group and 2% in the Schizophrenia/ Psychosis group. Use of specific drug classes for each of these five diagnostic groups is shown in Table 2.

**Table 2.**  
**Percentage of Children in Diagnostic Group that Used**  
**Four Major Classes of Psychotropic Medication (N=28,317)**

	Anti-hyper-kinesis	Atypical anti-psychotic	SSRI or Newer Anti-depressant	Mood Stabilizer
ADD/ADHD	69%	15%	21%	7%
Bipolar Disorder	25%	55%	51%	51%
Major Depression	12%	24%	55%	12%
Multiple Diagnosis	52%	69%	63%	51%
Schizophrenia-Psychosis	13%	70%	39%	22%

As can be seen in Table 2, most of the ADD/ADHD diagnostic group was receiving anti-hyperkinesis medication and most of the schizophrenia/psychosis diagnosis children were receiving atypical anti-psychotic medication. In both the multiple diagnosis and Bipolar Disorder groups, it was clear that a wide variety of medication types were prescribed. In all groups, it can readily be demonstrated that many children on psychotropic medication received prescriptions for multiple classes of medication over the course of the year examined.

## Summary

Very little research has been conducted on the effects of psychotropic medication on children. In comparing columns in Table 2, it is clear that many children with adult diagnoses are getting multiple types of medication. This multiple-class prescribing pattern could be due to switching between medication classes or to concomitant prescriptions among multiple classes. Further investigation needs to be conducted to explain this pattern and also compare these findings against practice guidelines for children with mental illnesses.

In Data Brief #2 (October 2003), it was shown that the diagnostic groups examined in depth for medication use in this study (ADHD, Schizophrenia/ Psychosis and Affective Disorders ), were comprised largely of school age children, although there was some representation across all age groups. Further work also needs to be done to determine the prevalence and patterns of psychotropic medication use in various age groups of children receiving Medicaid mental health services for these diagnostic groups.